CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-111

NPDES NO. CA0029742

WASTE DISCHARGE REQUIREMENTS FOR:

SOUTHLAND CORPORATION
SUPER-7 SERVICE STATION
200 SARATOGA AVENUE
LOS GATOS, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board) finds that:

1. Southland Corporation (hereinafter discharger) is the former owner of a gasoline station located at 200 Saratoga Avenue in the City of Los Gatos, Santa Clara County.

2. The discharger, by application dated January 10, 1990 and supplemental information dated April 19, 1990 has applied for waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).

3. An undetermined amount of gasoline was released in the area of the underground fuel tanks and pumps. The fuel release was detected upon the installation of soil vapor detection probes in 1986. All underground tanks and associated piping were removed and replaced in 1987.

4. A total of ten groundwater monitoring wells have been installed on-site. Groundwater monitoring data has indicated that free product (approximately 1/4" thick) was floating on the groundwater table at a depth of approximately 15 feet below ground surface. The free product, which has not been observed since it was first detected in April 1986, appears to have been limited to the area of the former underground tank complex. A plume of dissolved fuel contaminants has spread at least 100 feet beyond the tank complex.

5. Site investigations show that the groundwater beneath the site has been polluted by floating gasoline, dissolved petroleum hydrocarbons, dissolved benzene, toluene, xylenes, ethylbenzene, naphthalene, 2-methylnaphthalene, and bis (2-ethylhexyl) phthalate. In addition, beryllium, chromium, copper, lead, mercury, nickel, thallium, and zinc were detected in groundwater samples obtained from the site.

6. The discharger proposes to install a groundwater extraction system on-site consisting of one recovery well fitted with a down-hole pump. The discharger proposes to treat the extracted groundwater by utilizing an air stripper to remove the dissolved contaminants. The treated groundwater will be discharged to the storm sewer.

7. The Board adopted Resolution No. 88-160 on October 19, 1988. The Resolution urges dischargers of extracted groundwater from site cleanup projects to reclaim their effluent and that when reclamation is not technically and economically feasible to discharge to publicly owned treatment works (POTWs). If neither reclamation nor discharge to POTWs is technically and economically feasible, it is the intent of the Board to adopt NPDES permits authorizing the discharge of extracted groundwater.

8. According to the discharger, reclamation of the treated groundwater in this area is not technically and economically feasible. The discharger does not use a significant volume of water at its property, and there are no demands for irrigation or industrial process water in the area. In addition, the San Jose/Santa Clara Water Pollution Control Plant will not accept the discharge of the treated groundwater into their facilities. Therefore, the groundwater will be discharged to the storm sewer.

9. The system will be designed to handle a flow of approximately 10 gallons per minute or 14,400 gallons per day (gpd). Effluent will be discharged through an inlet into a storm sewer located adjacent to the site. The storm sewer drains into Los Gatos Creek (latitude 37 degrees, 13 minutes, 10 seconds; longitude 121 degrees, 59 minutes, 30 seconds), which ultimately drains into Vasona Reservoir (see Attachment A).

10. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for Los Gatos Creek and Vasona Reservoir.

11. The existing and potential beneficial uses of Los Gatos Creek and Vasona Reservoir are:

    a. Municipal and Domestic Supply
    b. Groundwater Recharge
    c. Freshwater Replenishment
    d. Contact and Non-Contact Recreation
    e. Wildlife Habitat
    f. Fish Spawning and Migration
    g. Cold and Warm Freshwater Habitat

12. The existing and potential beneficial uses of the groundwater in the Santa Clara Valley groundwater basin are:
    a. Municipal and domestic supply
    b. Industrial process supply
    c. Industrial service supply
    d. Agricultural supply

13. The Basin Plan prohibits discharge of "wastewater which has particular characteristics of concern to beneficial uses": (a) "at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any nontidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof" and (b) at any point in "San Francisco Bay south of the Dumbarton Bridge.".

14. The Basin Plan allows for exceptions to the prohibition referred to in Finding 13 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.

15. Exception to the prohibition referred to in Finding 14 is warranted because the discharge is an integral part of a program to clean up polluted ground water and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would affect beneficial uses. Should future studies indicate chronic effects, not currently anticipated, the Board will review the requirements of this order based upon Receiving Water Limitation D.1.e.

16. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin." The discharger's groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.

17. Effluent limitations of this Order are based on the Basin Plan, State plans and policies, U.S. Environmental Protection Agency guidance, and best engineering and geologic judgement as to best available technology economically achievable.

18. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

19. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an

opportunity for a public hearing and an opportunity to submit their written views and recommendations.

20. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
2. The discharge shall be limited to treated groundwater and added chemicals which do not adversely affect the environment and comply with requirements of this Order.

3. The maximum monthly average flow shall not exceed 14,400 gpd. If additional units, similar to the original treatment units, are provided additional flow may be permitted in proportion to the capacity of the additional units upon written approval of the Board's Executive Officer.

B. Metals Limitations

1. The discharger shall undertake the metals study described in B.2. below, if the effluent at the point of discharge to the storm drain contains constituents in excess of the following limits:

Constituent	Unit	Instantaneous Maximum
a. Arsenic	ug/l	20.0
b. Beryllium	ug/l	5.3
c. Cadmium	ug/l	10.0
d. Chromium	ug/l	11.0
e. Copper	ug/l	20.0
f. Cyanide	ug/l	25.0
g. Lead	ug/l	5.6

h.	Mercury	ug/l	1.0
i.	Nickel	ug/l	7.1
j.	Silver	ug/l	2.3
k.	Thallium	ug/l	13.0
l.	Zinc	ug/l	58.0

2. If the effluent at the point of discharge to the storm drain contains constituents in excess of the limits in B.1. above, the discharger shall submit the following reports acceptable to the Executive Officer:

a. Within one month of finding an exceeded limit, submit:

1) A workplan and schedule for determining the severity, extent, and source of metals contamination on the Southland site; and

2) A workplan for a three month study evaluating metals concentrations (a) in the effluent, (b) in the storm sewer discharge to Los Gatos Creek, (c) upstream in Los Gatos Creek, and (d) downstream in Los Gatos Creek. The workplan should include, at a minimum, determinations of pH, hardness, total suspended solids, total dissolved solids, and their effect on the analytical results. The workplan should propose that a statistically significant number of water samples (filtered and unfiltered) be obtained from the areas specified.

b. Within five months of finding an exceeded limit, submit a report which presents the findings of the study described in B.2.a.2. above.

c. Within six months of finding an exceeded limit, submit a final report that evaluates the cost of treatment to achieve compliance with the effluent limitations versus potential beneficial use impacts. Various methods of metals removal should be described. Board staff will review the report and make recommendations regarding appropriate effluent limitations for metals.

C. <u>Effluent Limitations</u>

1. The effluent at the point of discharge to the storm drain shall not contain constituents in excess of the following limits:

Constituent	Unit	Instantaneous Maximum
a. Benzene	ug/l	1.0
b. Ethylbenzene	ug/l	5.0
c. Toluene	ug/l	5.0
d. Xylenes	ug/l	5.0
e. Polynuclear Aromatic Hydrocarbons	ug/l	15.0
f. Total Petroleum Hydrocarbons as gasoline	ug/l	50.0
g. Bis (2-ethylhexyl phthalate	ug/l	50.0

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5

3. TOXICITY:

   The survival of test fish in 96-hour static renewal bioassays of the discharge shall be a median of 90% survival and a 90 percentile value of not less than 70% survival.

D. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the

receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen:	5.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause lesser concentration(s) than specified above, the discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	pH:	The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.
c.	Un-ionized ammonia:	0.025 mg/l as N Annual Median 0.4 mg/l as N Maximum at any time

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

E. Provisions

1. The discharger shall comply with all sections of this Order immediately upon adoption.

2. The discharger shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Executive Officer. As new groundwater extraction and treatment systems are completed, the schedule of monitoring specified in Part B, Table 1, of the Self-Monitoring Program will be reviewed.

3. The discharger shall notify the Regional Board if the self-monitoring program results, or if any activity has occurred or will occur which would result in a frequent or routine discharge of any toxic pollutant not limited by this Order.

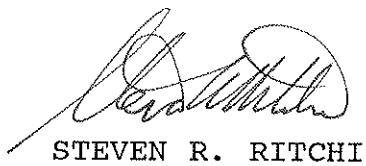
4. This permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through the comprehensive monitoring program included as part of this order.

5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986 except Items A.10, B.2, B.3, C.8 and C.11.

6. This Order expires August 15, 1995. The discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

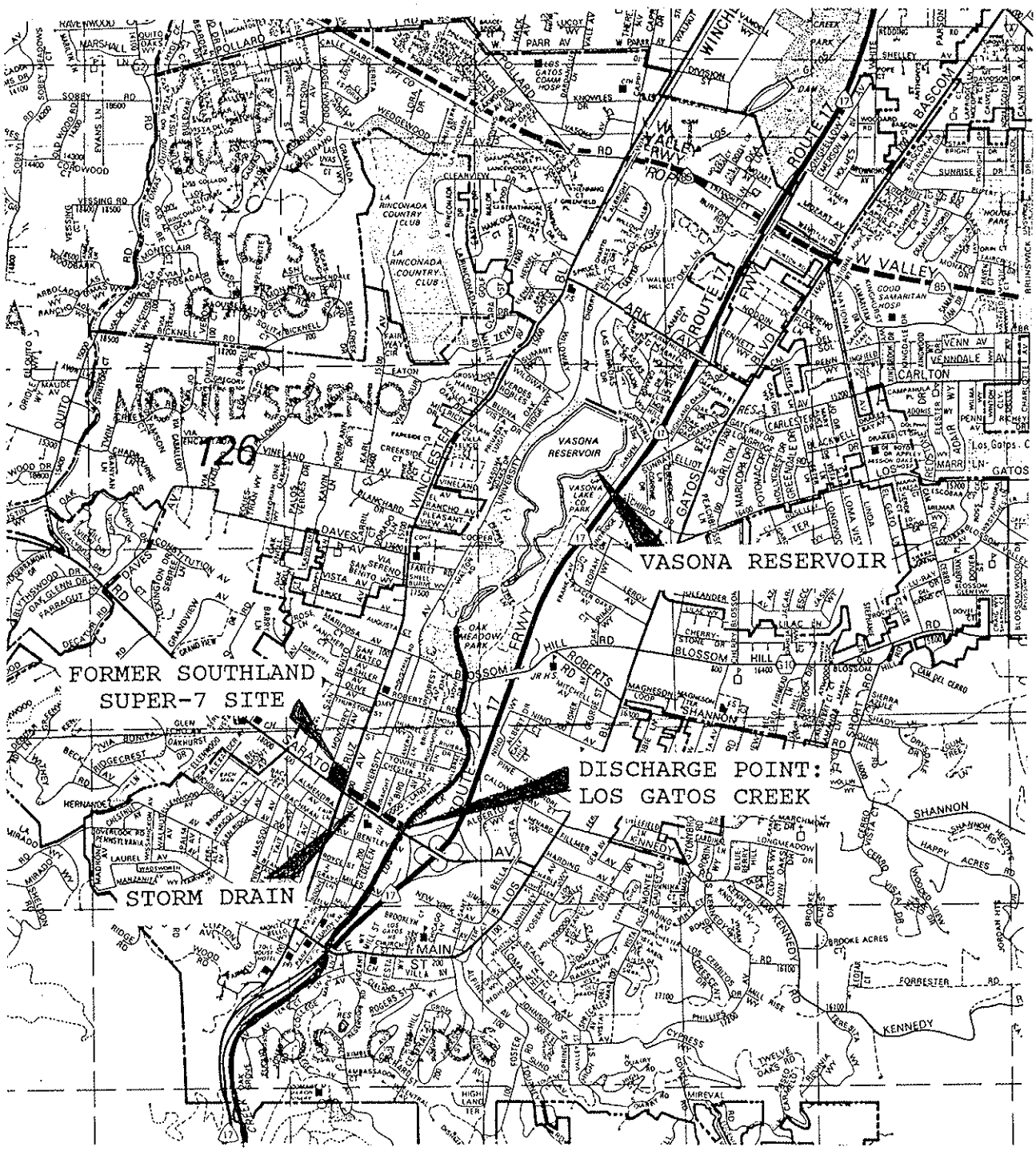
7. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act, or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on August 15, 1990.



STEVEN R. RITCHIE
EXECUTIVE OFFICER

Attachments:
Attachment A (Site Map)
Standard Provisions & Reporting Requirements, December 1986.
Self-Monitoring Program



ATTACHMENT A

NORTH

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

LOCATION MAP FOR

FORMER SOUTHLAND SUPER-7 SITE
200 SARATOGA AVENUE
LOS GATOS, SANTA CLARA COUNTY

DRAWN BY: CSF	DATE: 5/3/90	DRWG. NO.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

SOUTHLAND CORPORATION
SUPER-7 SERVICE STATION

200 SARATOGA AVENUE
LOS GATOS, SANTA CLARA COUNTY

NPDES NO. CA0029742

ORDER NO. 90-111

CONSISTS OF

PART A (dated December 1986 Mod. SBTD 1/23/87)

AND

PART B

Part B

SELF MONITORING PROGRAM FOR FORMER SOUTHLAND SUPER-7 SITE
CITY OF LOS GATOS, SANTA CLARA COUNTY

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	
I-1	At a point after groundwater extraction and immediately prior to discharge to the treatment unit.

B. EFFLUENT

E-1	At a point after treatment but before discharge into the storm drain leading to Los Gatos Creek.

C. RECEIVING WATERS

C-1	At a point 50 feet downstream from the point of discharge into Los Gatos Creek.

II. START UP PHASE AND REPORTING

A. The Board's Executive Officer shall be notified in writing of the date of start up within 7 to 14 days before start up begins.

B. During the original start up for the treatment system, sampling of the effluent must occur on the first and fifth day. On the first day of the original start up, the system shall be allowed to run for at least two hours or until stabilized; then, influent and effluent shall be sampled and submitted for analysis. Prior to receipt of the results of the initial samples, all effluent shall be discharged into a holding tank (that is contained, not discharged into the storm drain) until the results of the analyses show the discharge to be within the effluent limits established in the NPDES Permit. The operation may be shut down after the first day's sampling to await the analyses results and, thereby, reduce the amount of storage needed for start up. If the results of the analyses show the discharge to be in violation, the effluent shall be disposed in accord with the provisions of Subchapter 15, Title 23, California Administrative Code.

After the first day's sampling shows compliance, the system shall be operated for a total of five days with the discharge to the storm sewer, and be sampled again. While the fifth day's samples are being analyzed, the discharge may be discharged to the storm sewer as long as the analyses are received within 48 hours of sampling, and then, continue to be discharged to the storm sewer if the analyses show compliance. If a violation should occur, the discharge shall be directed to a holding tank and contained or the system shall be shut down.

If the system is shut down during start up because of a violation, the Regional Board shall be notified within one day and corrective measures shall be taken. If the system is shut down more than 48 hours during the original start up (awaiting analyses results, etc.), the original start up procedures and sampling must be repeated. If the system is shut down after the start up period (maintenance, repair, violations, etc.) the reason for shut down, corrective action taken and the proposed start up procedures shall be reported to the Board at least 15 days before start up.

III. MISCELLANEOUS REPORTING

A report describing the need, method of chemical application and disposal shall be submitted to the Board at least 30 days before the use of any chemicals in the treatment, or operation and maintenance of the treatment units, is to begin.

IV. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given in Table 1 (attached).

V. BIOASSAY REQUIREMENT

The fish species to be used for compliance in the bioassay shall be rainbow trout.

VI. MODIFICATION TO PART A OF THE SELF-MONITORING PROGRAM

A. Delete Sections:

D.1.a., D.2.a., D.2.d., D.2.e., D.2.g., D.2.h., and E.4.

B. Insert Sections:

D.2.a. Samples of effluent and receiving waters shall be collected at times coincident with influent

sampling unless otherwise stipulated. The Regional Board or Executive Officer may approve an alternative sampling plan if it is demonstrated that expected operating conditions warrant a deviation from the standard sampling plan.

D.2.d. If analytical results are received showing any instantaneous maximum limit is exceeded, a confirmation sample shall be taken within 24 hours and results known within 24 hours of the sampling.

D.2.e. If any instantaneous maximum limit for a constituent, other than metals, is exceeded in the confirmation sample described in Section D.2.d., the discharge shall be terminated until the cause of the violation is found and corrected. For other violations, the discharger shall implement procedures that are acceptable to the Executive Officer on a case by case basis.

E.6. Waste Treatment Facilities

a. Deposits, discolorations, and/or plugging in the treatment system (stripping tower, carbon filters, etc.) which could adversely affect the system reliability and performance.

b. Operation of the float and/or pressure shut-off valves installed to prevent system overflow or bypass.

C. Modify Sections:

G.4. Written reports under G.4. shall be filed quarterly, by the 15th of January, April, July, and October.

G.4.b. The report format shall be a format that is acceptable to the Executive Officer.

G.4.d. The report format shall be a format that is acceptable to the Executive Officer.

G.4.e. The report format shall be a format that is acceptable to the Executive Officer. NPDES Discharge Monitoring Report, EPA Form 3320-1, is provided as guidance. Influent and effluent data summary reports shall be submitted only to the Regional Board and do not need to be submitted to the EPA.

Address the copy to the Regional Board as follows:

Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1800 Harrison Street, Suite 700
Oakland, CA 94612

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-111.

2. Was adopted by the Board on August 15, 1990.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by Executive Officer or Regional Board.

Steven R. Ritchie
Executive Officer

Attachments: Table 1
Appendices: A-E

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1		E-1		C-1								
TYPE OF SAMPLE	G		G		G								
Flow Rate (mgd)			Cont										
BOD, 5-day, 20°C, or COD (mg/l & kg/day)													
Chlorine Residual & Dosage (mg/l & kg/day)													
Settleable Matter (ml/1-hr. & cu. ft./day)													
Total Suspended Matter (mg/l & kg/day)													
Oil and Grease (mg/l & kg/day)													
Coliform (Total or Fecal) (MPN/100 ml) per req't													
Fish Tox'y 96-hr. % Surv'l in undiluted waste			D/M										
Ammonia Nitrogen (mg/l & kg/day)													
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)	D/M		D/M		Q/V								
Dissolved Oxygen (mg/l and % Saturation)	D/M		D/M		Q								
Temperature (°C)	D/M		D/M		Q								
Electrical Conductivity	D/M		D/M		Q								
Secchi Disc (inches)													
Arsenic (mg/l & kg/day)	D/M		D/M		V								
Beryllium (mg/l & kg/day)	D/M		D/M		V								
Thallium (mg/l & kg/day)	D/M		D/M		V								
Chromium, Total (mg/l & kg/day)	D/M		D/M		V								
Copper (mg/l & kg/day)	D/M		D/M		V								
Cyanide (mg/l & kg/day)	D/M		D/M		V								
Silver (mg/l & kg/day)	D/M		D/M		V								
Lead (mg/l & kg/day)	D/M		D/M		V								

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1		E-1		C-1								
TYPE OF SAMPLE	G		G		G								
Mercury (mg/l & kg/day)	D/M		D/M		V								
Nickel (mg/l & kg/day)	D/M		D/M		V								
Zinc (mg/l & kg/day)	D/M		D/M		V								
Cadmium (mg/l & kg/day)	D/M		D/M		V								
All Applicable Standard Observations			M		M								
Bottom Sediment Analyses and Observations													
Total Ident. Chlor. Hydrocarbons (mg/l & kg/day)													
EPA 602	D/M		D/M		V								
EPA 601*	2/A		2/A		V								
EPA 8015 as gasoline	D/M		D/M		V								
EPA 610	D/M		D/M		V								
EPA 625	2/A-V		2/A-V		V								

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-intergrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwaters stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

D/M = Once during the first and fifth day; monthly thereafter.
2/A = Once during the first day; twice per year thereafter.
2/A-V = twice yearly and whenever there is a violation of EPA 602 limits.
V = Sampling should be performed whever E-1 is in violation.
* Concentrations of the ten largest peaks in the chromatogram other than the priority pollutants listed in the method shall be identified.